

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WISCONSIN,
MILWAUKEE DIVISION**

ROBERT LEE STINSON,)	
)	Case No. 09-cv-1033 -CNC
Plaintiff)	
)	
vs.)	
)	
THE CITY OF MILWAUKEE, et al)	
)	
Defendants.)	JURY TRIAL DEMANDED

DECLARATION OF CHARLES MICHAEL BOWERS

I, Dr. Charles Michael Bowers, declare under the penalty of perjury:

1. I am currently self-employed as a dental practitioner in Ventura, California. I have been a dentist for 36 years, a certified Senior Crime Scene Analyst (IAI) for over 12 years and licensed as a California attorney for 20 years (current status is Inactive). I am an Associate Professor of Clinical Dentistry at the University of Southern California Ostrow School of Dentistry (since 1978) and a Deputy Medical Examiner for the Ventura County (CA) Coroner/Medical Examiner's Office (since 1986). My education, training, peer reviewed publications, authored forensic textbooks and manuals, licensures, other university and governmental appointments are detailed in the attached *curriculum vitae*.

2. I reviewed the following materials in reaching my opinions:

- Composite Sketch of Assailant's Dentition
- Report of Dr. Lowell T. Johnson analyzing Robert Lee Stinson's Dentition
- Report of Dr. Raymond Rawson, December 8, 1985
- John Doe Hearing Testimony, December 3, 1984
- Preliminary Hearing Transcript, February 20, 1985
- Criminal Trial Transcript, *State v. Stinson*, No. L-0937
 - Trial testimony of Dr. Lowell T. Johnson, December 11, 1985
 - Trial testimony of Dr. Raymond Rawson, December 11, 1985
- Report of the Wisconsin Innocence Project: Robert Lee Stinson Evaluation of Bitemark Evidence, February 13, 2008
- On September 5, 2012, I viewed the following evidence at the Wisconsin State Crime Laboratory:
 - Blow-up transparencies of unlabeled and unknown lower occlusal view. Unknown magnification on both. No information on enlargements.
 - Photo case R84-2363 occlusal and mostly lingual views (2). Unlabeled.
 - 8.1 photo of abdomen.

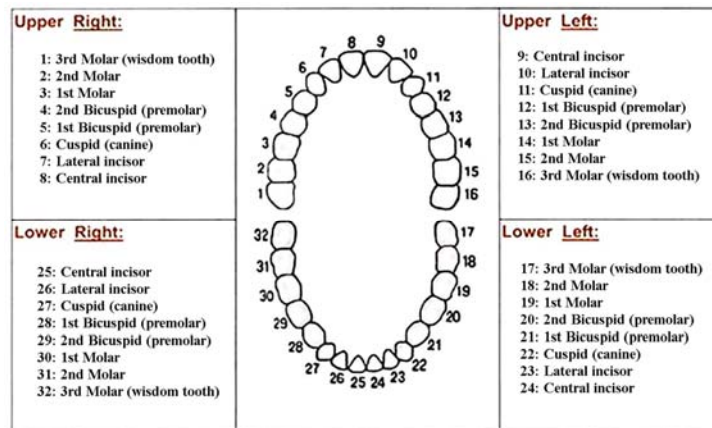
- Breast images. No scale in view.
- Transparencies: occlusal view RLS; no scale present/ used with a comparison of RES transparency with no scale.
- Transparencies abdomen with full upper dentition showing mostly lingual tooth anatomy; no scale. 2:1 scale assumed by Lab personnel claiming images were taken by a Polaroid CU-5 which assures correct magnification.
- Odontogram and waxbite of RLS taken 12/3/84.
- Silicon based impression taken of RLS “duplicate” upper and lower dental models.
- Photos prepared by Dr. Gregory Golden in 2007 at the Milwaukee Crime lab.
- Digital analysis of Greg Golden archive. Selected images.
 - 1438: Breast color: $35/3 = 11.6x$ magnification.
 - 1439: abdomen. $36.61/3 = 12.22x$
 - 1440: abdomen. $41.06/3 = 13.7x$ magnification.
 - 1441: $36.97 = 12.23x$ magnification. “CADLE 03/30/07”
 - 1442: breast. $37.54/3 = 12.51x$ magnification. “CADLE 03/30/07”
 - 1443: breast. $35.98/3 = 11.99x$ magnification.
 - 1444: breast. $58.56/3 = 19.52x$ magnification.
- Report by Dr. George R. Morgan, November 26, 1985
- Affidavit of David Cadle and Exhibits (Dckt. 99)
- Testimony of Raymond Rawson in *State v. Ray Milton Krone*, No. CR 92-00212 (Ariz. Super Ct. Aug. 4, 1992)
- Gauger, James “The Memo Book”, Chapter 45: The Bite Mark Case pp. 329-335
- November 15, 1984 Supplementary Police Report re: Larry Darnell Patterson by Detectives Thomas Jackelen and James Gauger
- November 16, 1984 Supplementary Police Report re: Kenneth Edward King by Detectives Thomas Jackelen and James Gauger
- Lowell T. Johnson Response to Plaintiff’s Third Set of Interrogatory Requests
- Dr. Paula Brumit Report, June 27, 2011
- Dr. Paula Brumit Report, March 17, 2012
- Miranda-Goodchild Hearing, Plaintiff Production Bates 1148-1242
- Lowell T. Johnson Notes, Dep Exhibit 4
- Daniel Blinka Deposition – Pages 1, 4, 128, 184-186
- James Gauger Deposition – Pages 1, 7, 107-115, 161-163
- Raymond Rawson Deposition – Pages 2, 4, 60-61, 80-81
- Golden Work Product

3. The opinions that follow are made within a reasonable degree of scientific certainty as a forensic odontologist.

**Johnson and Rawson Used
Flawed Methodologies and Assumptions
To Analyze Mr. Stinson's Dentition and the Bite Mark Evidence**

4. The methodologies that Dr. Lowell T. Johnson ("Johnson") and Dr. Raymond Rawson ("Rawson") used to analyze Mr. Stinson's ("Stinson's") dentition were flawed and did not comport with the accepted standards of practice in the field of forensic odontology at the time.
5. In his report to District Attorney Daniel Blinka, Johnson described the steps he took to analyze the bite mark evidence and compare it with Stinson's dentition as follows: (1) comparisons of the models of the teeth of Robert Lee Stinson with a model of a portion of the right breast of Ione Cychosz; (2) comparison of models of the teeth of Robert Lee Stinson and 111 color photographs of the bite marks on the body of Ione Cychosz; (3) comparison of 2X black and white overlays of the biting edge of the teeth of Robert Lee Stinson to 2X color photographic prints of the bite marks on the body of Ione Cychosz; (4) comparison of wax exemplars produced by the teeth of Robert Lee Stinson with photographs and models of the bite marks on the body of Ione Cychosz; and (5) comparison of 2X black and white overlays of the biting edges of the teeth of Robert Lee Stinson with 2X black and white photographs of the bite marks on the body of Ione Cychosz. Rawson relied exclusively on Johnson's creation of (1)-(5) in reaching his conclusion.
6. As described further in my report, the methods of analysis that Johnson and Rawson used to compare Stinson's dentition with the bite mark injuries were unreliable and lacked scientific merit.
7. In addition, Johnson and Rawson relied on the following meritless assumptions about the human dentition that lack any empirical basis: (1) that each human dentition is unique; (2) when a perpetrator bites a victim's body, these unique or "unusual" characteristics of the perpetrator's teeth and biting pattern are accurately transferred to the victim's skin; (3) the ability of the dentition to transfer a unique or unusual pattern to human skin and the ability of the skin to maintain those dental features have been scientifically established; and (4) it is scientifically possible to conclusively link (i.e. "perfect match") an unknown bite mark (on human skin) to a known bite pattern of Mr. Stinson to the exclusion of all others. None of these assumptions Johnson and Rawson relied on in their analysis in this cases are scientifically valid.
8. I have included below a diagram identifying the proper terminology and Universal numbering system used in dental science for a full set of normal adult teeth below in Diagram One.

Diagram One:



Johnson's and Rawson's Use Of The Physical Models of Stinson's Teeth To Compare With the Breast Tissue Model And Photographs Of The Bite Marks Lacked Any Scientific Basis And Was Unreliable

9. The first method of analysis that Johnson identified in his report was to compare the physical models of Stinson's teeth with a model of the bite marks found on the right breast. Johnson and Rawson should have known that this type comparison was not a scientifically reliable method of analysis. Exhibit A (Wisconsin Innocence Project Report: Robert Lee Stinson Evaluation of Bite Mark Evidence ("Panel Report") at page 10).

10. There was no scientific literature present at the time to support its use. The reason this method lacks any scientific value is readily apparent. By placing physical models of Stinson's teeth on top of a plaster model of the breast tissue, Johnson totally obscured his ability to simultaneously observe all the biting surfaces of the teeth when he "matched" them to the imprint of the bite marks. In other words, this method does not allow the forensic odontologist to actually view the comparison of the biting edges of Stinson's teeth with the model of the bite injury. It is impossible to describe this method as reliable and scientific. In addition, there is no way to test the reliability of this method by reproducing its results. Any forensic odontologist who tried to replicate the results would similarly have his/her view of the biting surfaces of the teeth and the imprint of the bite marks blocked. Johnson and Rawson were not be able to make any scientifically reliable conclusions regarding whether Stinson's dentition correlated with the bite marks on the breast tissue using this method of analysis.

11. The second method of comparison that Johnson and Rawson employed was equally flawed and void of scientific basis as the one described above in Paragraph 9. Johnson and Rawson took the plaster dental models of Stinson's teeth and put them on top of 111 color photographs of the bite marks. The lack of reliability in this method is

obvious. *See* Panel Report at 5. By placing the physical molds of Stinson's teeth on top the color photographs, Johnson's and Rawson's ability to view any correlation between the biting surfaces of Stinson's teeth and the bite mark injury patterns would be totally obscured from their view. In 1984, a board certified forensic odontologist and forensic examiner would have known that this was a scientifically unsupported and unreliable method to compare a suspect's dentition to bite mark pattern injuries.

Johnson's Comparison of Wax Exemplars to Photographs and Models of the Bite Marks Lacked Any Scientific Merit

12. Johnson and Rawson utilized yet another invalid method of analysis when they only visually compared the wax exemplars that Johnson created of Stinson's teeth with photographs and models of the bite mark injury patterns. A wax exemplar is created by either having the suspect bite into the wax, or by pressing the individual's teeth or dental model of their teeth into a softened wafer of dental wax or clay to create an impression of the biting surface of the teeth. Johnson's and Rawson's use of the wax exemplar of Stinson's teeth created by Johnson in their analysis is not well described. In my opinion, they did not use it in their analysis, but merely visually "inspected" it. This distinction is important because simply "eyeballing" the relationship between the biting surfaces of Stinson's teeth and bite marks injuries lacks any scientific merit or reliability.

13. At the time Johnson and Rawson conducted their analysis, the proper use of wax exemplars of teeth to compare with the bite injury patterns was called the "radiopaque overlay technique." This technique would have entailed Johnson placing metallic powder into the wax's indentation pattern and then creating a properly sized and oriented radiograph of the exemplar. This radiograph would have shown the proper and accurate representation of the biting edges of the dental models. It would then be placed onto a properly sized photograph of the skin injury patterns. Johnson did not perform the proper use of wax exemplars. Again, he only resorted to "witnessing" the wax indentations and then "inspecting" the injury patterns, which Johnson and Rawson then used to mis-identify Stinson's teeth with the bite mark injuries. Alternatively, the second level option would have been for Johnson to hand trace the biting surface edges of Stinson's teeth from the molds to create a proper outline of Stinson's teeth. Hand tracing technique has the examiner placing an acetate sheet onto either the wax exemplars or photographs of the dental models and then carefully outlining the biting edges of each tooth on the clear acetate. The acetate is then manually transferred over the accurate representations of the bitemark injuries. The transparency carries just the tooth outlines onto the color photographs without the addition of obscuring features of either a dental model of Stinson's teeth or a semi-opaque intraoral photograph. Johnson and Rawson did not **use any of these reliable** techniques, all of which were available and commonly used in 1984, for accurately depicting the biting surfaces of teeth. Instead, Johnson and Rawson employed a scientifically unreliable method of visual analysis.

Johnson's and Rawson's "Overlay" Analysis Lacked Scientific Accuracy

14. Johnson and Rawson employed faulty overlay analysis to support their false conclusion that Stinson's teeth uniquely created the pattern injuries found on the victim. Valid overlay analysis that was done in 1984-85 involved the radiopaque overlay exemplar or the hand tracing processes described in Paragraph 12. These methods were the most reliable methods at that time because they reveal the actual biting edges of teeth without the surrounding irrelevant dental structures which obscure the tooth edge relationships. In contrast, Johnson compared the opaque transparency of the intra-oral photograph of Stinson's biting surfaces by placing it over various photographs of the bite marks reported later by Johnson to be a "highly accurate" 2Xs life sized. *See Exhibit A (Panel Report at 5)*. This method was flawed because only the biting edges of teeth are relevant in bitemark comparison. The Johnson photographic "portrait" of Stinson's entire maxillary teeth, gums and lips contains too much extraneous anatomical "noise" which prevents an accurate analysis of Stinson's tooth positions, and therefore is irrelevant and misleading. Johnson's method lacked "specificity" to accurately investigate the skin injury patterns.

15. Johnson's and Rawson's overlay technique is also flawed because of the photographic distortion in the bite mark injury photographs and the intraoral photographs taken of Stinson's teeth by David Cadle ("Cadle") on December 3, 1984. As trained forensic odontologists, it is my opinion that Johnson and Rawson should have insisted that scales were included in any photographs they used for their overlay analysis.

a. The CU-5 is a fixed focus camera. The CU-5 camera lens has multiple lenses and attachments that require the photographer to place a framework onto the top (directly above) of an object to be photographed. This frame establishes the focal length (distance from the lens to the object) and establishes a set magnification. The camera lens set does 2:1, 1:1, 1/4:1, and 1/2:1.

b. Mr. Cadle wrongly assumes that the photographs he took with his CU-5 camera did not need to be scaled because the CU-5 camera automatically took 1:1 or 2:1 scaled photographs. He wrongly assumed that they can be accurately enlarged without a scale present. *See Cadle Affidavit at ¶15*. I have measured the photographs taken by Cadle of the bite mark injuries and Stinson's dentition, and a large number of these photographs are not scaled to the dimensions Cadle states. That is why it was imperative for Johnson and Rawson to only use photographs of the teeth and bite mark injuries that included a scale in the photograph. While the improperly scaled photographs of the bite mark injuries was problematic, even more troubling is the distortion present in the inter-oral photographs taken of Stinson's teeth by Mr. Cadle and the CU-5.

With regard to the intraoral photographs Mr. Cadle took with the CU-5 Dental Kit, it was especially important to include a scale in the photograph

because of the angular distortion created by his photographic technique in this case. A scale would have revealed the distortion in the photographs. These photographs were important because the overlay photographs of Stinson's upper and lower teeth are what Johnson and Rawson compared with the bite mark injuries to say there was a "match." First, the picture on Stinson's teeth is actually a photograph of a **reflection** in a large intra-oral exam mirror held inside Stinson's mouth. You cannot put the CU-5 lens frame into a human mouth. It is too big. That is why the mirror is placed inside the mouth with the patient opening wide. The mirror is placed all the way back in the mouth and the mirror to tooth distance varies from back teeth to front teeth.

The CU-5 will take a 1:1 photograph of the reflection in the mirror **only** if the mirror is parallel to the lens **and** the teeth. This parallelism is not possible in intraoral photography due to anatomical limitations. When the mirror is not parallel to the teeth, as in this case, then the photographs are not properly 1:1. That is precisely the distortion that resulted in the intraoral photographs of Stinson's teeth because it is impossible for the mirror to be parallel to the teeth when held inside a subject's mouth. The CU-5 was made to take 1:1 photos if the lens and the object of forensic interest are properly aligned. That is not what occurred in this case. The alternative photographic methods described in Paragraph 12 have would eliminated angular distortion created by the Mr. Cadle. He does not know how far the mirror is from Stinson's teeth. The further away the mirror distance is the reflection of the teeth becomes smaller.

c. The proper method of using a CU-5 to take photograph of the biting surfaces of the teeth without distorting the image would have been possible in this case. Cadle should have taken a photograph of the dental model of Stinson's teeth. This is described more fully in Paragraph 12 above.

d. Mr. Cadle's use of these intraoral photos of teeth for all additional photographic representations of Mr. Stinson's dentition compounded the errors in his photography and Johnson's and Rawson's attendant analyses. Cadle's original assumption that the CU-5 would create automatic life size imagery of teeth was faulty. The distorted photographs that resulted adversely effected all the subsequent steps and conclusions by Johnson and Rawson.

e. In particular, these improperly scaled prints were used for later enlargements set by the original scaled (incorrectly as stated in 15.c) negatives. The correct way is to enlarge properly scaled images.

16. Johnson's and Rawson's "overlay" analysis was also improper because they used unscaled injury and overlay photographs in their analysis. Proper overlay technique at that time requires placement of a ruler or measureable reference to be placed in the

camera's field of view next to any photographic evidence. Scaled photography was the accepted practice in the field of forensic odontology in 1984-85 because it allows the forensic odontologist to confirm that the comparison of the photograph of the bite mark injury a suspect's dental biting surfaces are the same proportions. The earliest forensic odontologists required use of scaled photographs. A certified forensic odontologist, such as Johnson or Rawson, would have known that the use of scaled photography was the only proper way to conduct overlay analysis. Use of unscaled photography by a forensic odontologist was unacceptable as a method of overlay analysis in 1984 and renders the comparison unreliable. *See* Exhibit B (American Society of Forensic Odontology Workbook by Dr. Robert Spiegel and Dr. Norman Sperber). In the forensic odontology manual authorized by the ASFO in 1980, it is clear that scales were to be included in the photographs of the bite mark injuries. *Id.* at page 19 ("Take multiple photographs of the body and bite mark with a centimeter or inch scale placed as near as possible to the bite mark.").

17. As the panel of forensic odontologists who reviewed the bite mark evidence in this case for Stinson and the Wisconsin Innocence Project ("the Panel") noted in their Report, the photographs are not properly scaled and are dimensionally inconsistent. The Panel detected up to 2 millimeter variations (considered unacceptable "instrumentation error") in the widths of the anterior teeth. Panel Report at 5. My analysis concurs with the Panel's findings. In fact, my findings exceed their 2mm value. The skin injuries and other dental evidence images Johnson and Rawson used were not properly scaled which is a failure of following proper photographic protocol.

**Johnson and Rawson Went To Great Lengths To
Try to Make The Bite Mark Evidence Match
Stinson Even Though It Was Plainly Evident Stinson
Could Not Have Made These Bite Marks**

18. There are multiple examples that demonstrate that Johnson and Rawson went out of their way to manipulate the bite mark evidence and their analysis to try to make Stinson's dentition "match" the bite mark evidence when it was obvious that Stinson's teeth could not have made the bite mark injuries on the victim.

19. The most obvious example of this is that Johnson and Rawson went to extreme efforts to try to "fit" Stinson's missing tooth number 8 (right central incisor) onto the bite mark patterns that Johnson and Rawson observed in the victim. For example, with respect to the small bite on the abdomen, which Johnson identified as Bite 2, Johnson and Rawson actually ignored the tooth size and position of the upper teeth in an effort to try to declare a "match" to a mark in the bite mark injury pattern with Stinson's broken tooth no. 8. Stinson's tooth no. 8, which was broken to the root, could not create a mark on the victim's skin without significant damage occurring in the skin by the adjacent teeth. Such damage did not occur at all in Bite 2. Trained forensic odontologists such as Johnson and Rawson would not make a mistake like this because one of the most fundamental principles in an odontologist's analysis of bite mark injury patterns is that an

individual's tooth position and tooth size must correlate or correspond in a significant alignment with the bitemark pattern.

My analysis of Bite 2 indicates the size, location on the skin, and volume of the tooth marks strongly suggests that Johnson and Rawson actually mislabeled the upper and lower arches on Bite 2; that is, what Johnson and Rawson identified as the biter's upper teeth/arch are actually the lower teeth/arch – and vice-versa . This is a critical mistake. Proper orientation of a suspect's the upper and lower teeth in a bite mark injury pattern is the most fundamental aspect of bite mark analysis. Johnson and Rawson would be expected to not make such an obvious mistake of misidentifying the upper and lower arches in a bite mark injury pattern unless they were trying to make Stinson's dentition match the bite marks injury patterns that they observed.

20. In Figure One (below), I have created a slide that demonstrates this point and the lengths to which Johnson and Rawson would have had to reach to misidentify the upper and lower teeth in Bite 2. Please note that the Figures in this affidavit use the dental orientations/positions chosen by Johnson and Rawson (i.e. "anchoring"). I have placed green areas with tooth numbers to indicate their positioning decisions. I then used red arrows with tooth numbers to indicate the exclusionary features which result. Figure One combines the autopsy photograph of the small bite on the abdomen (identified by Johnson and Rawson as Bite 2) in the "background" with the digital overlay of Stinson's upper front teeth numbered in red as 5, 6, 7, 8, 9, 10, 11, and 12 in the "foreground." Figure One shows that Johnson and Rawson should have excluded Stinson for the following reasons:

a. Tooth no. 8 has no available biting surface to make a mark as they state.

b. The adjacent tooth marks for teeth 9 and 10 that are visible are relatively minor and made no depth of injury to the skin. Stinson's tooth 8 has no observable dental structure other than the gum root structure. The depth of the bite for 9 and 10 could not have been equivalent to no. 8 (which is missing a massive amount of tooth structure). Measurement of the bitemark depth required for Stinson's tooth no. 8 to make a mark was obtained from a simple examination of the adjacent tooth no. 9. Figure Two demonstrates the 10 mm depth necessary for Stinson's tooth 8 to have made a mark on the victim's skin (the blue arrow is the level of depth necessary for tooth no. 8 to have marked. The red arrow indicates the depth of tooth no. 9 would have had to penetrate the skin).

c. I used the same orientation as Johnson and Rawson suggested for Stinson's teeth on Bite 2 and the result was that tooth no. 9 significantly encroaches on the tooth no. 8 location. This would have been obvious to Johnson and Rawson. Figure Three illustrates the encroachment of Stinson tooth 9 onto the injury assessed by Johnson and Rawson as tooth no. 8. This is an exclusionary feature.

d. Johnson's and Rawson's analysis of Bite 2 is also clearly wrong because their analysis is that Stinson's teeth nos. 10 and 11 made no mark on the skin, while Stinson's tooth no.12 did create a mark. This is inexplicable and lacks any scientific basis given Stinson's dentition and the evidence of the normal biting surfaces of these teeth. There is no empirical basis for Johnson's and Rawson's conclusion that teeth nos. 10 and 11 should not have marked the victim's skin where as tooth no.12 left a mark.

Figure One: Photograph of Bite 2 with digital overlay of Stinson's upper teeth in place according to Johnson and Rawson (no. 12 green arrow and their no. 10 and no. 9 positioning). The red arrows indicate areas of exclusionary discrepancies that result from their orientation.

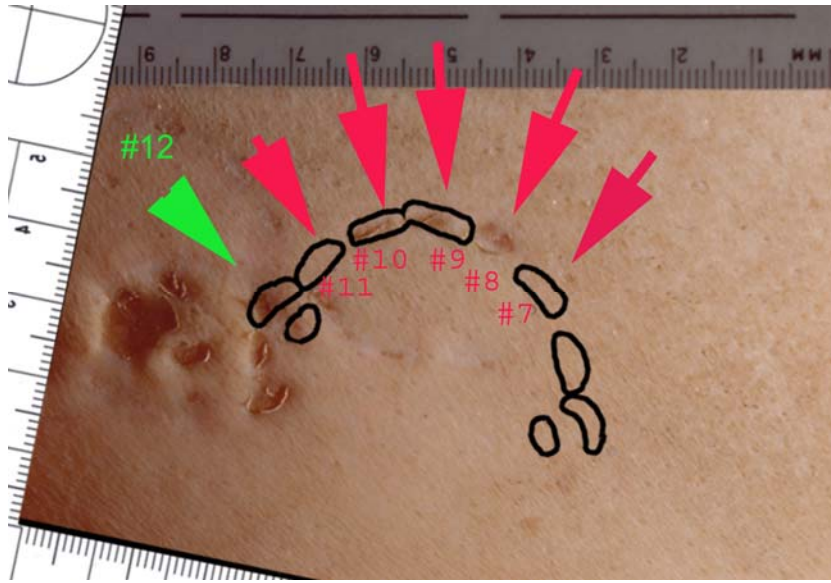


Figure Two: The 10 mm red arrow indicates the depth of tooth penetration necessary for the Stinson's tooth no. 8 to leave a mark (blue line). The adjacent tooth no. 9 would also have to penetrate up to the blue line. This is not supported by the features of Bitemark #2.

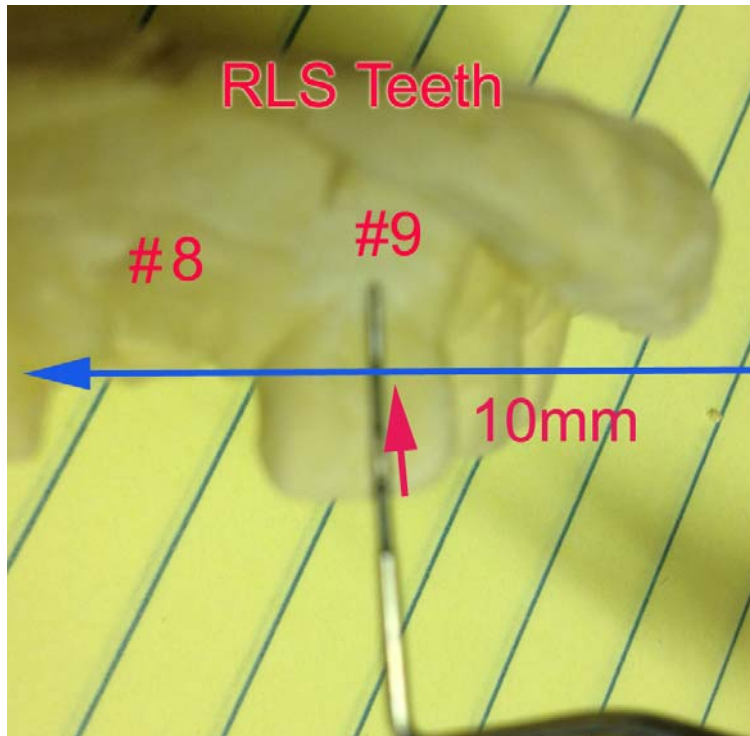


Figure Three: Johnson's and Rawson's Orientation of Bite 2 Excludes Stinson due to dimensional differences between the injury marks and RLS dentition



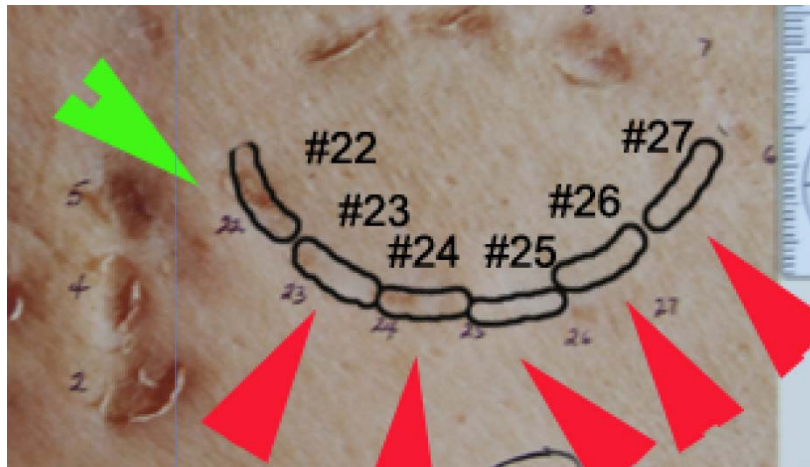
21. Figure Three describes the exclusionary results of placing RLS teeth no. 8, 9, and 10 onto the positions determined by LTJ and RR. The circumferential volume of Stinson's teeth no. 9 and 10 are larger than the skin marks by values over 300% (See table one below). This indicates a major discrepancy and no correlation between the bitemark pattern and RLS dentition. This means that Stinson's teeth were too large to

have made these bite mark injuries and should have been clearly exclusionary for Johnson and Rawson.

Table One			
Tooth Numbers	#2 Bitemark	Robert Lee Stinson	Percentage Diff.
#9	176 pixels	643 pixels	360%
#10	136 pixels	447 pixels	320%

22. The lower teeth also do not correlate with the bite mark injury pattern in Bitemark 2. See Figure Four.

Figure Four: Overlay of Stinson's Lower Teeth With Bite 2. The red arrows indicate absolutely no correlation between the injury and RLS dentition.



23. The larger abdomen bite (identified by Johnson as Bite 1) also clearly excludes Stinson. First, because only one arch made an injury pattern, it was impossible for Johnson and Rawson to reliably determine whether the bite pattern was made by upper or lower teeth. You cannot make a positive identification from a one arch bite mark. I prepared two alternative orientations for the overlay of Stinson's teeth based on the various suggested orientations indicated by Johnson's numbering and each of these four orientations clearly exclude Stinson's teeth as having made these marks. Each of the four orientations are illustrated in Figures 5 & 6 below. All show exclusionary features.

Figure Five: Bite 1 Orientation Anchored By Teeth 11 and 12 (green arrows). The red arrows and red circle indicate exclusionary features.

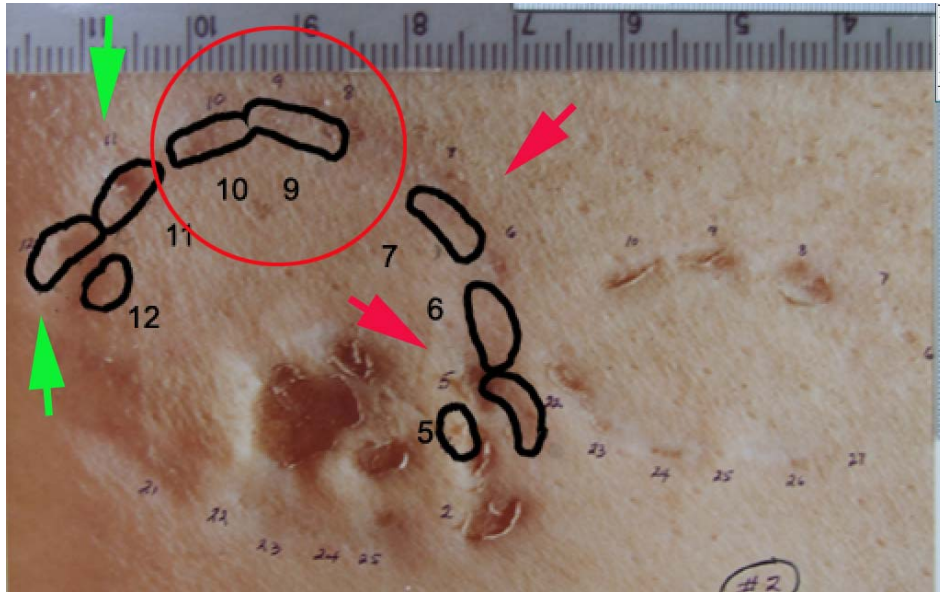
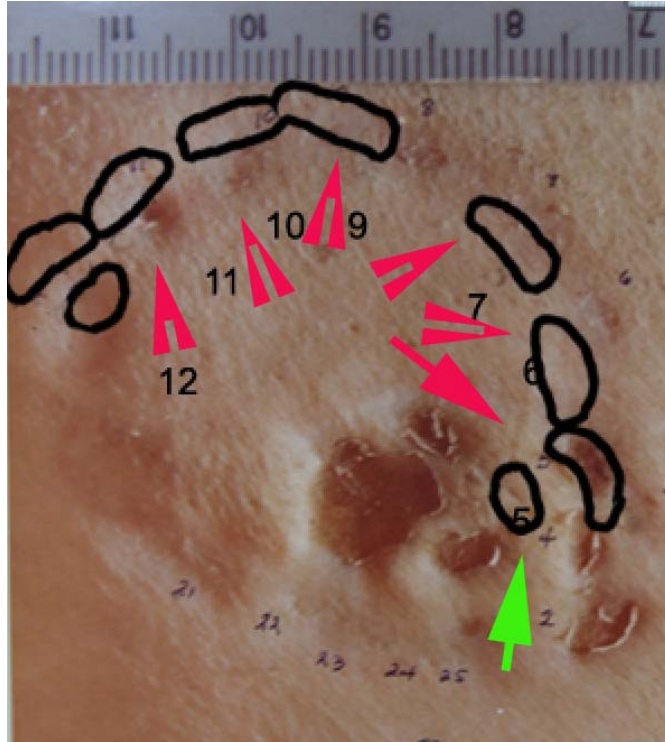
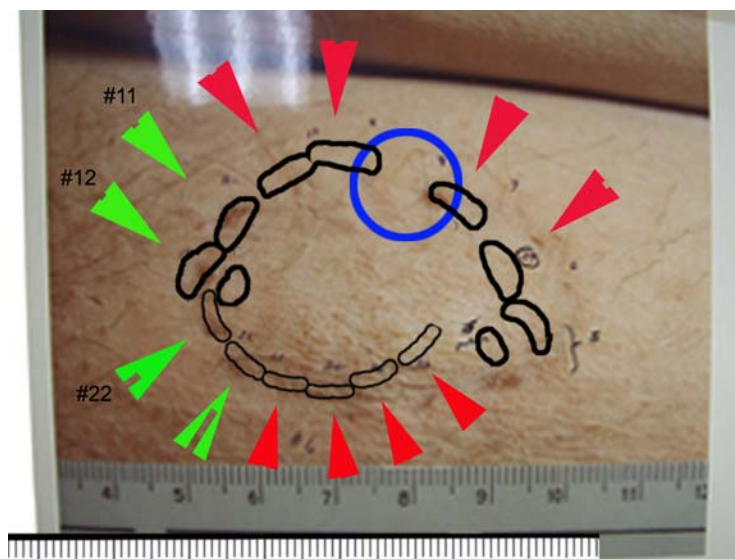


Figure Six: Bite 1 Orientation Anchored By Johnson's Notation for Tooth No. 5 (green arrow). Red arrows indicate exclusionary features.



24. Johnson and Rawson also distorted the orientation of the pubic bite, which Johnson identified as Bite 6 (See Figure 7, below). With respect to this bite mark, I agree with the Panel's opinion that Johnson and Rawson inexplicably oriented this bite by placing Stinson's missing tooth over a bite mark, which resulted in what Johnson and Rawson identified as teeth no. 7, 9 and 10, which are much longer than tooth no. 8, making no injury pattern at all. This orientation makes no sense and is inexplicable because it assumes the tooth broken at the root is inflicting an injury when the three adjacent intact teeth are not. Figure Seven shows the discrepancies between Johnson's and Rawson's orientation and Stinson's upper and lower teeth with red arrows. The green arrows are the anchor teeth indicated by Johnson on the photograph. Johnson's tooth no. 8 notation is noted with the blue circle and it completely misses the biting surface of Stinson's teeth and the space/gap for his missing tooth no. 8, shown by the blue circle. All of which are exclusionary findings and no evidence exists for Johnson's and Rawson's conclusion with respect to Bite 6.

Figure Seven: The erroneous Johnson and Rawson orientation on Bitemark 6.



25. Johnson's and Rawson's explanation for why a bite mark was found on victim's body where Stinson is missing a tooth "has no empirical basis or scientific basis and does not account for the absence of any marks by [Mr. Stinson's] adjacent, fully developed teeth." Panel Report at 8. Johnson and Rawson concocted an explanation that Stinson's missing tooth created a "lip-shaped" drag on the victim's body. The reason that this explanation lacked any scientific basis is that it is well-known that for Stinson's tooth that was broken at the root to make an imprint on the victim's body, the intact adjacent teeth would have had to inflict wounds that were much deeper. Stinson's missing tooth is 10 millimeters off the biting plane of the two adjacent teeth. *See* Figure Two. A trained forensic odontologist such as Johnson and Rawson would have known that for the root of Stinson's missing tooth to make an injury pattern on the victim's body, there would have had to be evidence of more traumatic injury patterns by the adjacent intact teeth nos. 7 and 9. The lack of any such evidence for the bite mark injuries for the adjacent teeth is further evidence that Johnson and Rawson were ignoring any evidence that would refute their pre-determined conclusion that Stinson made the bite marks.

26. Johnson's and Rawson's conclusion that Stinson's upper second molars imprinted on the body is also evidence that they were going to extremes to try to get Stinson's dentition to match the bite mark evidence. *See* Exhibit A (Panel Report) at 8. As the Panel discussed in their Report, this conclusion was inexplicable because molars are located so far back in the mouth that they almost never leave an impression in a bitemark. "It is extremely unusual and somewhat puzzling" that Johnson and Rawson would conclude a second molar participated in a bite. *Id.*

27. Although Johnson and Rawson relied extensively on the bite mark injury patterns located on the right breast of Cychosz, these bite mark injury patterns were especially unreliable given the nature of breast tissue and the partial bite mark patterns. I concur with the Panel's determination that Bites 3, 4, and 5 excluded Stinson. *See* Panel Report at 12-17. With respect to Bite 3 on the areola of the right breast, using Johnson's

orientation of Stinson's upper teeth result in teeth nos. 5, 6 and 10 "falling completely outside the injury pattern." *Id.* at 13. In addition, teeth nos. 23 and 24 are larger than the pattern injuries. And, the injury pattern for tooth 25 has a very unique trapezoidal shape that is not present on Stinson's biting surface for his tooth 25. In addition, Stinson's tooth no. 25 is wider than the injury pattern. Bite 4 is marked by Johnson and Rawson as having been inflicted by Stinson's lower teeth. However, no orientation of the overlay of Stinson's lower teeth correlates with this bite mark injury. Bite 5 was located on the right side and lateral to the areola of the right breast. With respect to this bite, it is evident that Stinson's upper teeth could not have made this bite mark injury. Using Johnson's and Rawson's orientation for teeth 9 and 10, Stinson's tooth 7 and tooth 8 are significantly below the bite mark pattern. Similar to the abdomen and pubic bite marks, Johnson and Rawson indicate that normal tooth 7 did not make a mark whereas the missing tooth 8 created an injury pattern, an explanation that lacks any scientific basis.

**Johnson's Description Of The Bite Mark Injury
Evidence As "Consistent" and "Overwhelming" Was Knowingly Misleading**

28. In the conclusion of his written report to Blinka, Johnson describes the amount and quality of bite mark evidence available for comparison in this case as follows: "The availability of so many different areas of the body bitten and the vast number of individual tooth marks for comparison, together with the repetition of the consistent and specific details in each method of comparison cause the evidence to be, in my professional opinion, overwhelming." Johnson's description is knowingly inaccurate and misleading.

29. In fact, none of the bite marks are identical and instead demonstrate the inconsistency of bite injury patterns in human skin. The multiple injuries present on the victim's body all present bite mark patterns that differ in detail and overall pattern shape. This underscores the variability of bite marks reflected on skin. Each bite mark is different due to the physical properties of skin that make it a poor impression material and the unknown forces present when the skin was bitten.

**Johnson Knowingly Provided A False Level Of Certainty
For His Conclusions That Has Never Been Accepted
In The Field Of Forensic Odontology And Is Scientifically Unsupported**

30. Johnson concluded in his report that it was his professional opinion "to a reasonable degree of scientific certainty, that the teeth of Robert Lee Stinson would be expected to produce bite patterns identical to those which I examined and recorded" in his analysis. The level of certainty that Johnson ascribed to his conclusions were knowingly false. The field of forensic odontology prohibits such certainty and did at the time of Johnson's analysis. There is absolutely no scientific basis for Johnson to reach his conclusion that Stinson's dentition was unique and the bite injuries he observed were identical to the pattern that only Stinson's teeth would make to the exclusion of all others. Johnson would have known this in 1984 because it is impossible to reach this conclusion

within the field of forensic odontology. Bite marks in human skin do not create a perfect imprint of an individual's teeth that can be used to compare with a suspect's dentition and reliably conclude with any scientific merit that it was this individual to the exclusion of all others. There was never the ability to reach such certainty in the field of forensic odontology. Even today, with the enhanced ability of computer analysis, forensic odontologists are prohibited from opining to this level of certainty.

Six Forensic Odontologists Have Concluded That The Bite Mark Evidence Does Not Match Stinson And Never Did

31. Six forensic odontologists have concluded that the bite mark evidence found on Cychosz excludes Stinson, including the four odontologists who reviewed the evidence on behalf of Stinson and the Wisconsin Innocence Project Dr. Gregory Golden, DDS, Dr. Richard Senn, DDS, Dr. Norman Sperber, DDS, Dr. Denise Murmann, DDS, as well as the State of Wisconsin's forensic odontologist, Dr. Paula Brumit, DDS, who re-analyzed the bite mark evidence for the prosecution of Moses Price, and myself.

32. Specifically, I concur with the Panel's opinions that Johnson and Rawson had no scientific evidentiary basis for the following conclusions:

- a. Although it would be expected that Stinson's teeth would leave no mark for his missing tooth number 8 while teeth numbers 7 and 9 should be well-represented in a bite mark produced by Stinson's teeth, Johnson and Rawson repeatedly reached the exact opposite conclusion. They wrongly identified that Stinson's missing tooth number 8 created a prominent mark while the adjacent intact teeth 7 and 9 left no mark, such as in their analysis for the large and small bites found on Cychosz's abdomen (Bite 1 and Bite 2) as well as the well-defined supra-pubic bite (Bite 6). I concur with the Panel's determination that "[t]his glaring inconsistency has no rational explanation." Innocence Project Report at 8.
- b. Johnson and Rawson concocted an explanation that Stinson's edge of the broken tooth dragged along the skin and created a lip-shaped mark. Their explanation lacks any scientific merit or empirical basis. In addition, their lip-shaped explanation does not account for why teeth numbers 7 and 9, which are fully intact, left no marks for Bites 1, 2 and 6. *Id.* at 8, 11 and 18.
- c. Johnson and Rawson made the impossible designation that Stinson's upper second molar (tooth No. 2) produced an injury pattern in the large abdomen bite (Bite 1) when a tooth located that far back in the mouth does not make an imprint and has only been shown to do so in experimental laboratory conditions.

- d. Johnson's and Rawson's overlays were done improperly and occluded their view of the biting edges of Stinson's teeth.
- e. When analyzed properly, Stinson's teeth do not coincide with the bite mark injury patterns.
- f. The bite marks Johnson identified on the right breast, to the extent they have any evidentiary value (Bites 7 and 8 were excluded from the Panel and my analysis because they were lacking in evidentiary value) also exclude Stinson's teeth.
- g. Stinson can be excluded has having inflicted any of the bite marks.

**It Was Impossible for Johnson To Exclude
Other Suspects During the Cychosz Homicide Investigation and
Stinson's Criminal Trial By Only Viewing a Photograph of Their Teeth**

33. Johnson claimed to have been able to evaluate and exclude two individuals as having produced the bite marks on Cychosz, who were missing their front teeth or a portion of their front teeth, by simply viewing photographs of these suspects' mouths. There is no scientific basis for him to have done so with only the frontal photographs of the individual's teeth as found in the police files. In order for Johnson to exclude an individual, he would have needed some basis to evaluate the biting edges/surface of these individual's teeth either by having taken a mold of their teeth or a wax exemplar of the biting surfaces of their teeth. By simply looking at portrait of the individual with their mouth open, Johnson had absolutely no empirical basis to exclude these individuals. Similarly, there was no scientific basis for Johnson to exclude the individual at Stinson's criminal trial by simply by having him open his mouth in the hallway outside the courtroom as he did with Robert Jenkins. *See Johnson's Criminal Trial Testimony* on December 11, 1985PM at pages 104-108.

Rawson's History of Bad Bite Mark Analysis

34. Rawson provided bite mark analysis and testimony against another individual, who was falsely implicated in a murder based on bite mark evidence. *See State v. Krone*, 182 Ariz. 319 (1995). In the case against Ray Krone, Rawson produced a highly unusual and inflammatory video in which another dentist placed the molds of Krone's teeth to the bite marks on the deceased victim's body. Trial Transcript at 7, *State v. Krone*, No. CR 92-00212 (Ariz. Super Ct. Aug. 4, 1992). Rawson also testified to a false degree of certainty in that case, testifying that he was "certain" that Krone's teeth matched the bite mark injuries, *id.* at 5, and that it was an "excellent" match. *Id.* at 120.

35. Like Stinson, Ray Krone was exonerated after DNA evidence implicated another man in the crime.

**Rawson's Analysis of the Bite Mark Evidence in Las Vegas on January 17, 1985
Was Too Short To Have Allowed Him to Reach Any Scientifically Valid
Conclusions Regarding Stinson's Teeth Correlating with the Bite Mark Evidence**

36. Rawson initially reviewed the bite mark evidence created by Johnson, including the breast bite impression, overlays and breast mold, as well as the molds and photographs of Stinson's teeth for approximately an hour on or about January 17, 1985 in Detective Gauger's and Jackelen's Las Vegas hotel room. It was impossible for Rawson to have reached the conclusion that Stinson's teeth produced the bite marks on the victim's body with any amount of scientific accuracy in such a short time span. Indeed, Rawson testified himself that it takes approximately "40 to 50 hours to come to scientific certainty on a bite mark" in the *Krone* case. *Krone Trial Testimony* at 120. In this case, Rawson provided his verbal opinion to the detectives and prosecutor that he agreed with Johnson's conclusion that Stinson's teeth matched the bite mark injuries when it was impossible for him to have performed the necessary evaluation to reach this conclusion in only an hour.

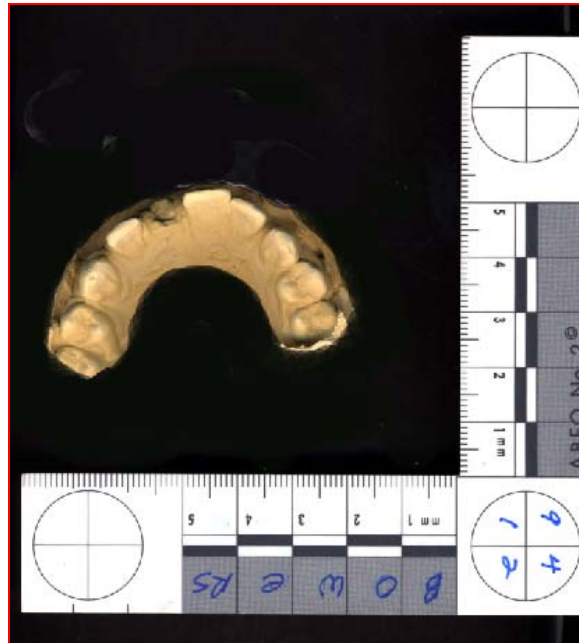
My Methods of Analysis

37. On September 4, 2012, I went to the Wisconsin State Crime Laboratory ("Lab") to view the bite mark evidence from the Cychosz homicide investigation. The evidence that was available for review at the Lab is indicated in evidence inventories attached to my report as Exhibits C and D. While at the Lab, I took a dental impression of the model of Stinson's upper and lower teeth to create duplicate of the dental model Johnson made of Stinson's teeth in 1984.

38. I performed photographic analysis performed using an HP laptop computer, a Canon flatbed scanner and Adobe Photoshop software. The digital protocols regarding scanning, sizing of photographs and image comparison are outlined in the book "Digital Analysis of Bitemark Evidence" (2002 2d edition) written by Dr. Raymond Johansen and myself. This manual is now available as freeware on the Internet or via request from the authors. I also created dental stone exemplars of Stinson's dentition were created by me from impressions of dental models labeled as "RLS" at the Milwaukee Crime Lab on September 4, 2012. These exemplars were scanned and 1:1 (life-size) magnification and used to create digital "overlays" or outlines of RLS anterior teeth. I then compared these digital dental exemplars to numerous print and transparent images available to me on September 4, 2012 at the Milwaukee Crime Lab. I later reviewed and analyzed additional evidence obtained and photographed in 2007 by Dr. Greg Golden.

39. Figure Eight shows the duplicate teeth model I created from the impression I took of Stinson's 1985 dental models.

Figure Eight: Dental model of Stinson's upper teeth. Please note placement of "L" shaped ruler in the image.

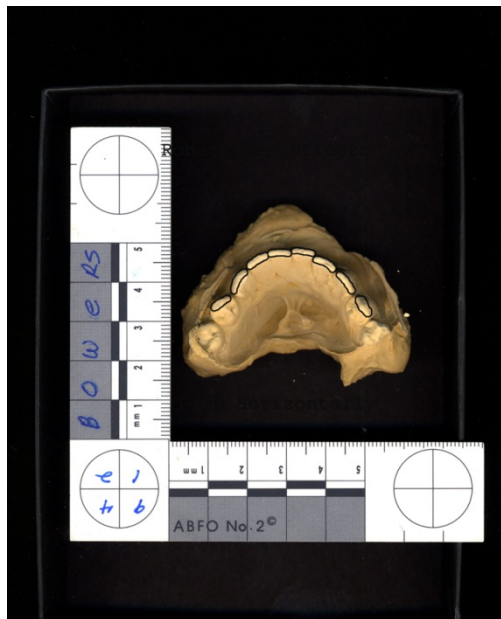


40. I then used this model to create a digital overlay of the outline of the biting edges of Stinson's teeth by scanning the image. Figure Nine illustrates the digital outline of Stinson's upper teeth nos. 5, 6, 7, 9, 10 and 11. I repeated this process for Stinson's lower teeth as depicted in Figure Ten.

Figure Nine: Digital overlay (black outlines) of Stinson's upper teeth nos. 5, 6, 7, 9, 10 and 11. The outlines are placed on only the biting edges of Stinson's upper teeth. Please note the ruler in place along the bottom border of the image with this image.

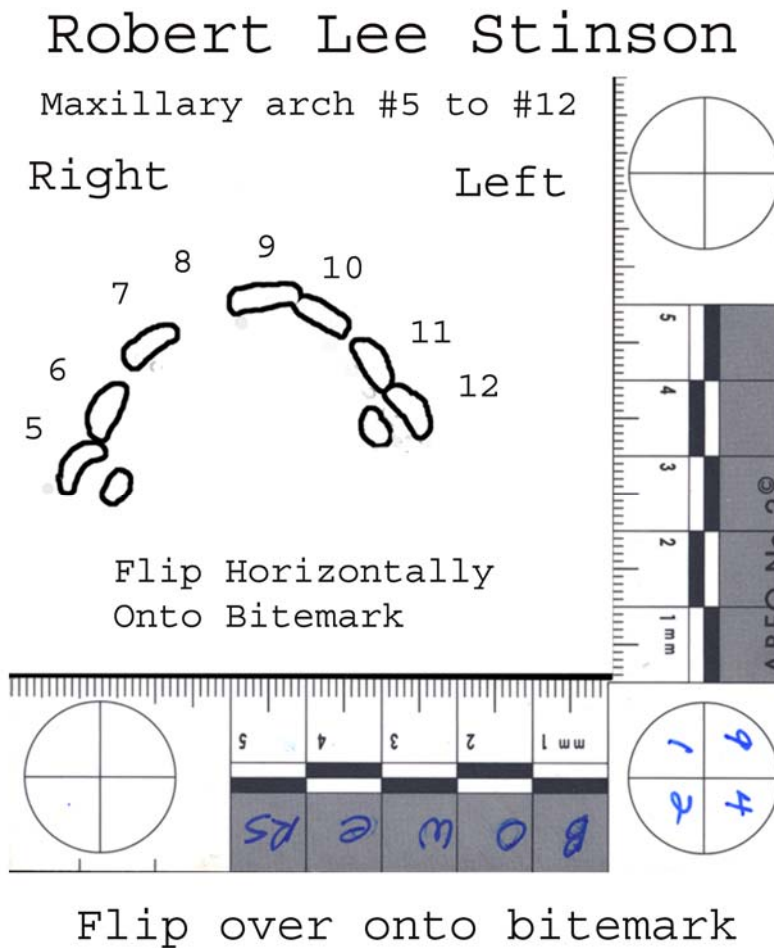


Figure Ten: Stinson's lower dental model with digital overlay in place.



41. I then flipped these digital overlay images so that I could directly compare them with the photograph of bite mark injury patterns.

Figure Eleven: The completed digital overlay of Stinson's upper teeth. Please note the digital overlay of Stinson's lower teeth is not presented here for sake of brevity.



In 1984, The Pool of Bite Mark Experts Was Small

42. I started to attend meetings of the American Board of Forensic Odontology in 1983. At that time, bite mark analysis was a relatively new field of study. As I recall, the group of odontologists who were experienced in bite mark analysis was smaller than those who identified human remains from dental records, as in the case of a mass accident like a plane crash. According to my recollection, there were approximately 25 members of the American Association of Forensic Science ("AAFS") Odontology section and the American Board of Forensic Odontology ("ABFO") that were active in the bite mark analysis, including Drs. Johnson and Rawson.

Conclusion

For the reasons explained above, it is my opinion to a reasonable degree of scientific certainty as a forensic odontologists that Johnson and Rawson knowingly manipulated the bite mark evidence and Stinson's dentition to appear to "match" when there was in fact no correlation between Stinson's teeth and the bite marks inflicted on Cychosz's body, including but not limited to that there were injury marks in the position of tooth no. 8, which was broken at the root with no corresponding injury for the adjacent intact teeth nos. 7 and 9, they mislabeled the upper and lower teeth for Bite 2, which was an obvious mistake for a trained forensic odontologist, and Stinson's teeth do not correspond ("match identically") to other bite marks which include the Bites 3 to 5 found on the right breast tissue, on which Johnson and Rawson heavily relied.

Dated: November 15, 2012

Sincerely,

A handwritten signature in cursive script that reads "C. Michael Bowers".

C. Michael Bowers DDS JD

C. Michael Bowers DDS JD

Curriculum Vitae of
Charles Michael Bowers

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EDUCATION

1991	Juris Doctor Ventura College of Law Ventura, CA
1980-1981	Medical Education Program, School of Medicine University of Southern California Los Angeles, CA
1975	Doctor of Dental Surgery University of Southern California School of Dentistry Los Angeles, CA
1971	Bachelor of Arts, Psychology University of Southern California College of Letters, Arts, and Sciences Los Angeles, CA

LICENSURE

1992	California Bar License Number: 163340
1975	California Board of Dental Examiners License Number: 24949

C. Michael Bowers DDS JD

BOARD CERTIFICATION

1999-2012 Certified Senior Crime Scene Analyst, International Association for Identification (IAI)

AWARDS

2003 Ventura County Board of Supervisors
Recognition of 20 Years of Service to the Coroners Office

1998, 1996 Certificate of Appreciation
Dan Lundgren
Attorney General, California Department of Justice

1994 Teaching Award, University of Southern California, School of
Dentistry, Mobile Dental Clinic

1993 Certificate of Merit
Dan Lundgren,
Attorney General, California Department of Justice

1977 Dental Ambassadors Award
University of Southern California, School of Dentistry ,Mobile
Dental Clinic

PROFESSIONAL ORGANIZATIONS

OKU (faculty)
Fellow, American Academy of Forensic Sciences
International Association for Identification
Member, California Bar

C. Michael Bowers DDS JD

PUBLICATIONS

Books

1. Bowers CM, **Forensic Expert Testimony, The Law and Science in Court**, Elsevier Publishing, 2013. In press.
2. Bowers CM, **Forensic Dentistry: An Investigator's Handbook**, Elsevier Publishing, Academic Press, 2004, 2d edition, 2010. Hard cover and ebook.
3. Bowers CM, with Raymond Johansen, **Digital Analysis of Bite Mark Evidence**, Forensic Imaging Services Publishing, Santa Barbara California, 2000, 2d edition 2004. Electronic edition.
3. Bowers CM, Editor, with Gary L. Bell, American Society of Forensic Odontology, **Manual of Forensic Odontology**, 3rd Edition. Published November 1995, reprinted 1998, 2000, 2001. Paperback.

Chapters in Books or Periodicals

1. Bowers, CM, *Digital Analysis of Bite Mark Evidence*, in **Medical-Legal Death Investigation**, Editors: Spitz and Fisher, CC Thomas Publishing Co., 5th Edition, 2006. Hardcover.
2. Bowers CM, Chapter 37, *Identification From Bitemarks*, in **Modern Scientific Evidence: The Law and Science of Expert Testimony**, Editors: Faigman, Kaye Saks, et al. 2012 edition, Thomson/West Publishers.
3. Bowers, CM, Penola, D, *Forensic Dentistry and Criminal Investigation*, in **Encyclopedia of Crime and Punishment**, 2002, Sage Publishing Co., Thousand Oaks, CA.
4. Bowers, CM, *Digital Analysis of Bite Mark Evidence; Jurisprudence Issues in Forensic Odontology*, **Dental Clinics of North America**, WB Saunders, Inc., April 2001. Hardcover.
5. Bowers, CM, *Identification from Bitemarks*, Chapter 24, David L. Faigman, David H. Kaye, Michael J. Saks & Joseph Sanders, Editors; **Modern Scientific Evidence: The Law and Science of Expert Testimony**, West Group Publishing Co. 1998, 2002, 2004. Hardcover.
6. Bowers, CM, **Proceedings of the European International Organization of**

C. Michael Bowers DDS JD

Forensic-Odontostomatology Millennium Meeting, Leuven Belgium. *The balance of DNA and bite marks: a lawyer's point of view*. Leuven University Press. August 2000.

7. Bowers, CM, *Age Determination from Teeth*, **Manual Forensic Odontology**, American Society of Forensic Odontology Publisher, 1995, 3rd Edition.
8. Bowers, CM, *Expert Witness Malpractice*, **Manual of Forensic Odontology**, American Society of Forensic Odontology Publisher, 1995, 3rd Edition.

Peer Reviewed Journal Articles

1. Bowers CM, Johansen RJ, *The identification of human remains using dental anatomic references*, **Journal of Forensic Sciences**. 2013. In press.
2. Bowers, CM, Pretty, I, *Inter-Examiner Agreement in Forensic Casework*, **Journal of Forensic Sciences**. 2009.
3. Bowers CM *Problem-based analysis of bitemark mis-Identifications. What DNA has done to contradict opinions of odontologists trained before the New Millennium*. Proceedings of the 2006 International Odont-Stomatology Society; Elsevier Publisher, **Journal of Forensic Society International**, Vol 159, Supplement 1, 15th May 2006.
4. Bowers, CM, Johansen RJ, *Photographic evidence protocol: the use of digital imaging methods to rectify angular distortion and create life-size reproductions of bite mark evidence*, **Journal of Forensic Sciences**. 2002; 47(1): 179-186.
5. Bowers, CM, Johansen RJ, *Digital imaging methods as an aid in dental Identification of human remains*, **Journal of Forensic Sciences**, 2002, 47(2), 354-359.
6. Bowers, CM, Johansen RJ, *Detection and Correction of Photographic Distortion in Bitemark Evidence*, **Federal Bureau of Investigation Forensic Science Communications**, July issue, 2001
7. Bowers, CM, Johansen RJ, *Detection and Correction of Photographic Distortion in Bitemark Evidence*, **Federal Bureau of Investigation Forensic Science Communications**, July issue, 2001.
8. Bowers, CM, Sweet DJ. *Accuracy of bite mark overlays: a comparison of five common methods to produce exemplars from a suspect's dentition*.

C. Michael Bowers DDS JD

Journal of Forensic Sciences, 1998; 43(2):362-367.

9. Bowers CM, Dailey, JC, *Aging of bitemarks: A literature review*, **Journal of Forensic Sciences**, 1997; 42(5):792-795.

10. Bowers CM, Law, Cathy, *Radiographic reconstruction of root morphology in skeletonized remains: A Case Study*, **Journal of Forensic Sciences**, 1996; 41(3):514-517.

Commentaries in Forensic Dental Publications

1. *Arguments on the Individuality of Teeth*. Forensics Imaging Services Web publication. <http://forensic.to/webhome/bitemarks>.
2. *Detection and Analysis of Anatomical and Photographic Distortion: The Torgerson Case from 1957 and 2001*. Forensics Imaging Services Web publication. <http://forensic.to/webhome/bitemarks>.
3. *Salivary DNA Swabbing and Bitemark Analysis*, American Society of Forensic Odontology Newsletter, Winter 1996
4. *Limiting Expert Testimony in Bitemark Analysis*, American Board of Forensic Odontology Newsletter, Fall 1996
5. *Aging of Bitemarks: Beyond the Pale of Forensic Odontology*, August 1995, American Board of Forensic Odontology Newsletter.
6. Editorial: *The Scientific Basis For Bitemark Probability Determination*, Summer 1998, American Society of Forensic Odontology Newsletter.
8. Editorial: Coroners Investigator: *Time of Death*, Winter 1998, American Society of Forensic Odontology Newsletter.

EDITORIAL ASSIGNMENTS

Editorial Board Member: *Journal of Forensic Sciences*, Blackwell Publisher.

Book reviewer: *Science*. American Association for the Advancement of Science

Editorial reviewer: *Science*. American Association for the Advancement of Science

Guest Editorial reviewer: *Collegium Anthropologicum*, Zagreb, Croatia.

Editorial reviewer: *Journal of the International Society of Odonto-Stomatology*

Guest Editorial reviewer: *Acta Odontologica Scandinavica*. Sweden.

Forensic Science reviewer: *Dimensions in Dental Hygiene*.

Editorial reviewer: Forensic Science International, Elsevier.

C. Michael Bowers DDS JD

MEDIA CONSULTING

December 2005

Script advisor to ABC series "In Justice."

January 2002

Artisan Entertainment Post Production Consultant and Interviewee, "Novocaine", starring Steve Martin.

February 2002

CBS News "60 Minutes" segment "Forensics." Technical consultant. Graham Messner producer.

August 2002

NBC Television; Chicago Network; "Bitemark used to exonerate two convicted of Murder: DNA evidence later supports dentist's opinion."

September 2004

Script consult for ABC "CSI: Crime Investigation."

FACULTY APPOINTMENTS

1975 - Present

Faculty Member, Adjunct Faculty
Current Rank: Clinical Associate Professor,
Ostrow School of Dentistry, University of Southern California
Faculty: USC Mobile Dental Clinic
Dental Medicine and Public Health
USC Mobile Clinic -
Lecturer in Dental Ethics - 1992
DAU, TEAM, Operative Dentistry - 1978-1981
Pediatric Dentistry – 1977

2001 - 2003

Adjunct Instructor, British Columbia Institute of Technology.
Forensic Science Technology

COURSE DEVELOPMENT

2004

University of Southern California Ostrow School of Dentistry
CMDT 602; *Intro to Forensic Dentistry*. 16 contact hours.

C. Michael Bowers DDS JD

2003	FSCT 8120; <i>Digital Analysis Using Adobe Photoshop</i> British Columbia Institute of Technology Forensic Science Technology Program; 28 contact hours.
2000, 2001	Online Education, <i>Exploring the Field of Forensic Odontology</i> , Knowledge Solutions Campus, 15 contact hours plus final examination.
2001, 2002	<i>Outline of Forensic Dentistry</i> , 21 contact hours plus final exam. British Columbia Institute of Technology, Forensic Science Technology. Program.
2000, 2001	<i>Digital Analysis of Bite Mark Evidence</i> , University of California Santa Barbara, CA, with Raymond Johansen DMD. Two day computer course utilizing Adobe Photoshop.
2000	<i>Digital Analysis of Bite Mark Evidence</i> , University of Texas, San Antonio, 16 th Forensic Symposium on Forensic Dentistry, with Raymond Johansen DMD.
2000, 2001	<i>Digital Analysis of Bite Mark Evidence</i> , Armed Forces Institute of Pathology, 35 th Annual Forensic Dentistry Meeting
1998	Forensic Program: <i>Death Takes a Holiday</i> , in association with the Bureau of Legal Dentistry, University of British Columbia; Program for Law Enforcement, Dentists and Death Investigators. Two day program.
1991-1992	Ethics and Dental Jurisprudence, USC School of Dentistry guest participant. Alvin Rosenblum course director.

SCHOLARLY ACTIVITIES

- Past-Contributing Editor, The American Society of Forensic Odontology

C. Michael Bowers DDS JD

Newsletter..

- Chairman, 2001-2002, American Board of Forensic Odontology Exam and Credentialing Committee. Supervised 2002 ABFO Board Examination

FORENSIC APPOINTMENT

Deputy Medical Examiner,
Medical Examiner's Office, Ventura, CA.

CONSULTING AFFILIATIONS TO PUBLIC POLICE AGENCIES

Ventura District Attorney's Office,

Ventura Sheriff's Department,

Ventura Police Department

Oxnard Police Department,

California Department of Justice

United States Department of Justice

Federal Bureau of Investigation

COMPLETED CASES / CASES OF NOTE

Current Cases Completed: Over 200 Civil
and Criminal Investigations.

Accepted in Court as a Dental Expert:
Superior Courts of California, Arizona. Texas, Norwegian
Supreme Court.

MASS DISASTER TEAM PARTICIPATION

2001 –2002 Technical Working Group on Mass Fatality Incidents. Task Force
member on Odontology and DNA. Sponsored by the National
Institute of Justice.

February 2000 Alaska Airlines 261

C. Michael Bowers DDS JD

Deputy Medical Examiner for the Ventura County Coroner's Office.
Chief Forensic Dentist in charge of dental identification.

December 1987 San Luis Obispo Sheriff's, Coroner Office
Assisted in the PSA 1771 Crash

September 1986 Los Angeles County Coroner's Office.
Assisted in the Aeromexico-Cerritos crash

SELECTED PROFESSIONAL PRESENTATIONS

February 2012 *The Costs of Wrongful Convictions: Social, Economic and
Personal, AAFS, Atlanta, GA.*

February 2011 *The Perfect Storm: Problems with Bitmark Analysis*
American academy of Forensic Sciences
Chicago, ILL.

September 2009 *Treatment of Special Patients: Informed Consent and Legal,*
University of Southern California CE Course.

May 2008 Bitemark analysis: Its strengths and weaknesses as a forensic
identification science. Pennsylvania Dental Association, Harrisburg,
PA.

February 2008 *Inter-Examiner Agreement in Bltemark Casework*
American Academy of Forensic Sciences, Washington, DC.

November 2007 *Forensic Dentistry and New Technology*
Bahamas Dental Society,
Nassau, Bahamas

May 15th 2006, *Problem-based analysis of bitemark mis-Identifications.*
Proceedings of the 2006 International Odont-Stomatology Society;
Leuven, Belgium.

October 2004 *Bite mark Recognition: Do DNA first.*
California Association of Criminalists Annual Meeting.

September 2003 FSCT 8120: *Forensic Odontology*
Lecturer with Iain Pretty Bds.

C. Michael Bowers DDS JD

British Columbia Institute of Technology
Forensic Science Technology Program

- July 2002 Guest Lecturer, University of California Channel Islands, Forensic Dentistry Section of "Chem/Anth 110; Forensic Investigations".
- May 2002 Keynote Speaker, Australia and New Zealand Forensic Science Society, Canberra, Australia. Masters Workshop on "Digital Forensic Analysis."
- January 2002 Ventura District Attorneys Office MCLE Program, "Admissibility Issues in Forensic Dentistry", 1.5 credits. DA Coordinator: Peter Kossoris.
- January 2002 "Inside the Crime Lab," UCLA Extension Program.
- August 2001 Forensic Investigation: California Coroner's Association.
- June 2001 Training Working Group in Mass Disaster Incidents, (TWGMFI). Orlando, Florida. Sponsored by the National Institute of Justice and the Forensic Science Institute. Panel participant.
- March 2000, 2001 Armed Forces Institute of Pathology 36th and 37th Forensic Dentistry Symposia , Washington, DC. *Digital Analysis of Bite Mark Evidence Using Adobe Photoshop.*
- February 2001 Course for the Missouri Emergency Response Identification Team St. Louis, MO. Two-day program giving overview of Forensic Dentistry.
- January 2001 California Dental Association, Sacramento, CA. *DNA Investigations in Forensic Dentistry and Digital Analysis of Bitemark Evidence. Two lectures.*
- August 2000 Millenium Meeting of the International Organization for Forensic Odonto-Stomatology, Leuven, Belgium. *Validity and Reliability Issues in Bite Mark Identifications; Digital Analysis of Bite Mark Evidence.* Two lectures.
- February 2000 Presentation, AAFS Annual Meeting, Reno, NV
Scientific Literature Review of Bite Mark Analysis,
With Iain Pretty BDS, MS.

C. Michael Bowers DDS JD

August 1998	University of Texas, San Antonio: Forensic Symposium; <i>DNA Analysis and Forensic Dentistry</i> .
	California Department of Justice: Victim of Violent Crimes Symposium; <i>DNA Analysis and Forensic Dentistry</i> .
August 1997	Fiji School of Medicine, Suva, Fiji <i>Forensic Odontology</i> .
August 1997	American Bar Association, Annual Meeting, San Francisco, CA Science and Technology Section, <i>Forensic Arts, Sciences, and Sleights of Hand</i> <i>Some Special Cases of Specialized Knowledge and Illusion</i> , Panel Participant
May 1997	<i>Dental Jurisprudence</i> Loma Linda University
February 1997	<i>Ethics and Pre-Trial Discovery Issues</i> American Association of Forensic Sciences Odontology Section
February 1996	<i>Legal Ethics and Forensic Odontology</i> Scientific Session, AAFS, New York
November 1995	<i>Moot Court for Forensic Dentists</i> , DJS Forensic Study Club, Vancouver, British Columbia
February 1995	<i>Binding Arbitration for the ABFO</i> Seattle, WA
September 1993	California Homicide Investigators Association, Annual Meeting. <i>Evidence Collection in Forensic Cases</i>
July 1991	Ventura District Attorney's Office <i>Bitemark Analysis</i>
August 1991	Ventura Child Protective Services <i>Child Abuse: Dental Signs</i>
February 1991	California Dental Lab Association

C. Michael Bowers DDS JD

Overview of Forensic Investigations

November 1988	USC School of Dentistry <i>Battered Wife Syndrome</i>
January 1988	<i>An Overview of Forensic Dentistry</i> Ventura, CA, American Association of Medical Transcribers
September 1987	<i>Update of Forensic Dentistry</i> Course Director/Lecturer Guest Lecturers: Dr Gerald Vale Dr. Judy Suchey Dr. Joe Anselmo Dr. Dr. Betty Hoffman
February 1987	American Academy of Forensic Sciences Odontology Section <i>Forensic Dentistry and Stress Factors</i>
December 1986	USC School of Dentistry <i>Child Abuse and the Responsibilities of the Private Practitioner.</i>
October 1986	Ventura County Dental Hygienist Society <i>The Dental Professional's Role in Forensic Dentistry.</i>
April 1986	USC School of Dentistry <i>Forensic Anthropology and Facial Reconstruction</i>
February 1986	American Academy of Forensic Sciences <i>Current Missing Persons Cases in Ventura, County, New Orleans, LA.</i>
December 1985	USC School of Dentistry <i>Bitemark Analysis and Case Studies</i>

ADVANCED PROFESSIONAL EDUCATION AND CONFERENCES

February 2011	American Academy of Forensic Sciences Chicago, ILL
---------------	---

C. Michael Bowers DDS JD

February 2010	American Academy of Forensic Sciences Seattle, WA
February 2008	American Academy of Forensic Sciences Washington, DC
February 2006	American Academy of Forensic Sciences Seattle, WA
February 2005	American Academy of Forensic Sciences New Orleans, LA
February 2004	American Academy of Forensic Sciences Dallas, Texas
February 2001	American Academy of Forensic Sciences Atlanta, Georgia
February 2000	American Academy of Forensic Sciences Reno, NV
July 1999	DNA Symposium University of British Columbia, BOLD Lab.
May 1999	Advanced STR Techniques in DNA Analysis Carlton University and RCMP Scientific Services Ottawa, Canada.
February 1999	American Academy of Forensic Sciences Orlando, Florida
February 1998	American Academy of Forensic Sciences San Francisco
February 1997	American Academy of Forensic Sciences New York ABFO Bitemark Workshop
February 1996	American Academy of Forensic Sciences Nashville, Tenn.
February 1995	American Academy of Forensic Sciences

C. Michael Bowers DDS JD

Seattle, WA

February 1994 American Academy of Forensic Sciences
San Antonio, TX

Bitemark Workshop,
American Board of Forensic Odontology
San Antonio, TX

February 1993 American Academy of Forensic Sciences
Boston, MA

February 1992 American Academy of Forensic Sciences
New Orleans, LA

February 1991 American Academy of Forensic Sciences
Anaheim, CA

February 1990 American Academy of Forensic Sciences
Cincinnati, Ohio

February 1989 American Academy of Forensic Sciences
Las Vegas, NV

September 1988 Forensic Dentistry Course
University of Texas, San Antonio, TX

November 1987 Advanced Course on Bitemark Analysis
Northwestern University, School of Dentistry, Chicago, ILL

February 1987 American Academy of Forensic Sciences
San Diego, CA

November 1986 Bitemark Analysis Workshop
Northwestern University,
Chicago, IL

July 1985 Masters Course In Death Investigation,"
St. Louis University, St. Louis, MO

February 1986 American Academy of Forensic Sciences
New Orleans, Louisiana

October 1985 Forensic Dentistry Course

C. Michael Bowers DDS JD

Armed Forces Institute of Pathology
Washington, DC

September 1985 Disaster Training Workshop
Los Angeles County/USC Medical Center
Gerald Vale, Course Director
Los Angeles, CA

February 1985 American Academy of Forensic Sciences
Las Vegas Nevada

October 1984 Dentistry's Role in Major Crime Investigation
Child Abuse and Disaster Identification